

**ABSTRACT OF THE DISCLOSURE**

BB input units input baseband received signals. Initial value computation units compute correlation values by performing correlation processings between the baseband received signals and a training signal in the interval of the training signal. A phase error estimating unit outputs a phase error signal based on the baseband received signals and the training signal. Weight computation units generate initial weighting coefficients by compensating the correlation values with the phase error signal, when the interval of the training signal ends. In the interval of a data signal, the weighting coefficients are updated from the initial weighting coefficients. A synthesizing unit adds up the weighting coefficients after weighting the baseband received signals with the weighting coefficients.